

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) An ultrasound contrast agent comprising an injectable oil-in-water emulsion wherein there are gas-containing nucleation sites associated with droplets of the dispersed oil phase.
2. (original) A contrast agent as claimed in claim 1 wherein the nucleation sites are present within dispersed oil phase droplets.
3. (original) A contrast agent as claimed in claim 2 wherein the nucleation sites comprise free gas microbubbles, surfactant- or lipid-stabilised gas microbubbles, polymer- or protein-encapsulated gas microbubbles, gas-containing porous solid microparticles, gas-containing rough-surfaced solid microparticles, gas-containing polymeric microparticles, or gas-containing fullerenes, clathrates or nanotubes.
4. (original) A contrast agent as claimed in claim 1 wherein nucleation sites are present within membranes stabilising the dispersed oil phase droplets or in contact with the outside of such membranes.
5. (currently amended) A contrast agent as claimed in claim 1 ~~in any of the preceding claims~~ wherein the oil phase comprises one or more components selected from aliphatic ethers, polycyclic oils and alcohols, heterocyclic compounds, aliphatic hydrocarbons, cycloaliphatic hydrocarbons and halogenated hydrocarbons, said component(s) having a boiling point not exceeding 60°C.
6. (original) A contrast agent as claimed in claim 5 wherein the oil phase comprises one or more perfluorocarbons.
7. (original) A contrast agent as claimed in claim 6 wherein said perfluorocarbon is selected from perfluorobutanes, perfluoropentanes, perfluorohexanes, perfluorocyclobutane, perfluorodimethylcyclobutanes, perfluorocyclopentane, perfluoromethylcyclopentane,

perfluorobutenes, perfluorobutadienes, perfluoropentenes, perfluorohexenes, perfluorocyclopentene, perfluorocyclopentadiene and perfluoro-*t*-butanol.

8. (currently amended) A contrast agent as claimed in claim 1 ~~in any of the preceding claims~~ wherein the oil phase contains a gaseous solute.

9. (original) A contrast agent as claimed in claim 8 wherein the oil phase comprises air, oxygen or carbon dioxide dissolved in a liquid fluorocarbon.

10. (currently amended) A contrast agent as claimed in claim 1 ~~in any of the preceding claims~~ wherein the dispersed oil phase droplets are stabilised by a surfactant selected from fatty acids, carbohydrate and triglyceride esters of fatty acids, phospholipids, proteins, block copolymer surfactants, fluorine-containing surfactants and cationic surfactants.

11. (currently amended) A contrast agent as claimed in claim 1 ~~in any of claims 1 to 9~~ wherein the dispersed oil phase droplets are stabilised by polymeric wall-forming encapsulating material or by incorporation into porous latex particles.

12. (currently amended) A contrast agent as claimed in claim 1 ~~in any of the preceding claims~~ wherein the oil phase has a boiling point not exceeding 42°C.

13. (original) A combined preparation for simultaneous, separate or sequential use as a contrast agent in ultrasound imaging, said preparation comprising:

- i) a contrast agent as claimed in any of the preceding claims, and
- ii) a vasodilator drug.

14. (original) A combined preparation as claimed in claim 13 wherein said vasodilator drug is adenosine.

15. (currently amended) A drug delivery agent comprising a contrast agent as claimed in claim 1 ~~any of claims 1 to 12~~ together with a therapeutic drug.

16. (original) A drug delivery agent as claimed in claim 15 wherein a hydrophobic drug is dissolved in the oil phase.

17. (original) A drug delivery agent as claimed in claim 15 wherein the drug is present as nano- or micro-sized particles.

18. (currently amended) A method of generating enhanced images of a human or non-human animal subject which comprises the steps of injecting a contrast agent as claimed in claim 1 ~~any of claims 1 to 14~~ into the vascular system of said subject and generating an ultrasound image of at least a part of said subject.

19. (original) A method as claimed in claim 18 wherein microbubble growth from the contrast agent is activated within the subject by application of external activation.

20. (original) A method as claimed in claim 19 wherein said external activation comprises ultrasound irradiation.

21. (currently amended) Use of a contrast agent as claimed in claim 1 ~~any of claims 1 to 12~~ in ultrasound therapy.

22. (original) Use as claimed in claim 21 wherein said therapy involves cell killing or blocking of blood flow to a site of interest.